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Signatures maintained on controlled copy in CAD QA office.

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**1.0 Purpose**

To outline an inspection process (which may include testing) for BNL manufactured, procured and/or installed items.

**2.0 Scope**

The requirements of this document apply to components, assemblies, subsystems, and systems which are manufactured and/or installed in the AGS by BNL personnel. Exceptions are development and maintenance materials which will be inspected only when specifically required by the cognizant engineers or scientists.

**3.0 Policy**

- 3.1 Inspections will be performed by qualified personnel in accordance with applicable instructions or procedures which describe the effort to be performed, and the criteria for acceptance.
- 3.2 Inspection procedures shall have as an objective the prompt detection of nonconformances that could adversely affect performance, safety, reliability, schedule, or cost.

**4.0 References**

AGS-QAP-404, Retention of QA Records.

**5.0 Procedure**

- 5.1 Inspections shall be performed, as applicable, for the following activities: fabrication, assembly, construction, installation, operation, and maintenance.
- 5.2 When appropriate, the cognizant engineers or scientists (CE/CS), with assistance of the AGS QA Office shall document the requirements for the inspection activity.
- 5.3 The CE/CS should utilize the latest revision of applicable drawings and/or specifications to prepare an item specific inspection procedure, generic inspection procedure data sheet, or Inspection/Test Record (I/TR), BQF-003. The inspection procedure may be contained within the item/material specification.
  - 5.3.1 Inspection procedures and/or data sheets shall either specify or have provisions for recording the identification (name, serial number or identification number) of the Measurement and Test Equipment used during the inspection/test.

- 5.4 Inspection procedures should define the parameters to be inspected, characteristics or functions that shall be verified; acceptance criteria, including any applicable standards or codes; requirements for special tools, fixtures, gauges, set-ups, etc.; special instructions relative to handling & storage of the material (e.g. age sensitive material); guidelines for the use of sampling inspection; and the records or data that are required.
- 5.5 Completed I/TR or inspection data sheets which contain nonconformances should be reviewed by the CE/CS to verify that required inspections were performed satisfactorily, and that all nonconformances have been recorded and dispositioned.
- 5.6 When work is in-process, the CE/CS may modify inspection procedures and work allowed to proceed, provided the CE/CS initials the modified instructions and submits the document to a technical review as soon as possible.
  - 5.6.1 If the proposed revision(s) is not approved, those items processed shall be identified as being nonconforming.
- 5.7 Items awaiting inspection should be stored separately from items that have been inspected
- 5.8 Nonconforming items that are awaiting disposition and defective items that are waiting to be reworked, returned, scrapped, or have been reworked and awaiting reinspection/test shall be uniquely identified and/or segregated, whenever feasible, from acceptable items or items awaiting inspection.
- 5.9 Inspection data shall be maintained per the requirements of AGS-QAP-404, Retention of QA Records.

## **6.0 Selection Of Samples**

Sample sizes shall be determined using the sample plans outlined in MIL-STD-105, Sampling Procedures and Tables for Inspection by Attributes, or as specified by the CE/CS. Samples shall be traceable to a specific lot and/or a defined period of manufacturing.